merging sub bitmaps having a corresponding coordinate in the output direction.

20. A device comprising:

at least one processor;

a memory; and

at least one computer program,

wherein the at least one computer program is stored in the memory and executable by the at least one processor, and

wherein the at least one computer program comprises commands for executing operations comprising:

dividing a three-dimensional model into a plurality of sub models such that an interface between adjacent sub models extends in a direction parallel with an output direction of a three-dimensional printer;

distributing operations of generating sub bitmaps of the plurality of sub models such that the operations of generating the sub bitmaps of the plurality of sub models are processed concurrently;

generating sub bitmaps of a plane perpendicular to the output direction for each of the plurality of sub models; and

merging sub bitmaps having a corresponding coordinate in the output direction.

21. A system for providing a printing service, comprising:

a user terminal;

a service center; and

a three-dimensional printer,

wherein the user terminal, the service center, and the three-dimensional printer are connected through a communication network, and

wherein the service center includes a bitmap generator, wherein the bitmap generator is configured to perform operations including:

receiving a three-dimensional model;

dividing the three-dimensional model into a plurality of sub models such that an interface between adjacent sub models extends in a direction parallel with an output direction of the three-dimensional printer;

distributing operations of generating sub bitmaps of the plurality of sub models such that the operations of generating the sub bitmaps of the plurality of sub models are processed concurrently;

generating sub bitmaps of a plane perpendicular to the output direction for each of the plurality of sub models; and

merging sub bitmaps having a corresponding coordinate in the output direction are the same among the generated plurality of sub bitmaps.

22. A method of providing a bitmap of a three-dimensional model to a three-dimensional printer, comprising:

receiving the three-dimensional model;

dividing the three-dimensional model into a plurality of sub-models along a direction orthogonal to an output direction of the three-dimensional printer;

assigning a first sub model from among the plurality of sub models to a first processor, and assigning a second sub model from among the plurality of sub models to a second processor;

simultaneously using the first processor to generate a sub bitmap of a plane of the first sub model and using the second processor to generator a sub bitmap of a plane of the second sub model, wherein the plane of the first sub model and the plane of the second sub model are each parallel to the direction orthogonal to the output direction;

merging the sub bitmap of the plane of the first sub model with the sub bitmap of the plane of the second sub model to create a merged bitmap, and

providing the merged bitmap to the three-dimensional printer.

23. The method of claim **22**, further comprising reassigning the first sub model from the first processor to the second processor, so as to use the second processor to generate a sub bitmap of another plane of the first sub model, wherein the other plane of the first sub model is also parallel to the direction orthogonal to the output direction.

* * * * *